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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,868	02/20/2004	Taro Bando	723-1474	5139

23117 7590 03/06/2008
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EXAMINER	
PINHEIRO, JASON PAUL	

ART UNIT	PAPER NUMBER
3714	

MAIL DATE	DELIVERY MODE
03/06/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/781,868	BANDO, TARO	
	Examiner	Art Unit	
	JASON PINHEIRO	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/19/2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-7, 10-17, 20-22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Truchsess (US 5734726) in view of Comair et al (US 2003/0045956).

Regarding claims 1, 11, and 21: Truchsess discloses an operating section/input step (S1, Fig. 7; Col. 3, Lines 43-45) for inputting, in accordance with the player's operation, at least acceleration operation input data (Col. 1, Lines 63-65) for accelerating a movement of the object (toy vehicle; Col. 1, Line 59) and deceleration operation input data (Col. 1, Lines 63-65) for decelerating a movement of the object; an acceleration sound storage section (Segments 1-6 of

memory 20, Fig. 1 and 4) in which a series of acceleration sound data including sound data of an accelerated portion generated as a result of the object accelerating from a minimum speed to a maximum speed are stored (Col. 3, Lines 49-53), although Truchsess does not specifically disclose storing the series of acceleration sound data of the objects in continuous address spaces it would have been an obvious modification to the device of Truchsess to utilize sequential access memory due in order to yield the predictable result of providing higher density memory at lower costs than random access memory. Truchsess further discloses a deceleration sound storage section (Segments 7-10 of memory 20, Fig. 1 and 4) in which a series of deceleration sound data including sound data of a decelerated portion generated as a result of the object decelerating from the maximum speed to the minimum speed are stored (Col. 3, Lines 49-53), although Truchsess does not specifically disclose storing the series of deceleration sound data of the objects in continuous address spaces it would have been an obvious modification to the device of Truchsess to utilize sequential access memory to yield the predictable result of providing higher density memory at lower costs than random access memory. Truchsess further discloses a read start address section (Col. 4, Lines 1-8) for selecting, based on operation input data input via the operating section, either one of the acceleration sound data and the deceleration sound data which are stored in the acceleration sound storage section and the deceleration sound storage section, respectively; a sound data reading section (22, Fig. 4-6) for sequentially reading, selected

sound data from the read start address calculated by the read start address calculating section (Col. 3, Lines 53-55); and a sound output control section (28, Fig.4-7) for outputting, as a sound, the sound data read by the sound data reading section (Col. 3, Line 58).

Truchsess further discloses recording sounds of a tangible object moving from a maximum velocity to a minimum velocity over a period of time (Fig. 1), and storing the sounds as data on a recoding medium (Col. 3, Line 40 – Col. 4, Line 27); dividing the data into segments designated by a plurality of states where a first state corresponds to velocity A and a second segment corresponds to velocity B (Col. 3, Line 40 – Col. 4, Line 8); Reading the data associated with the current velocity (data associated with the maximum velocity) (Col. 4, Lines 1-27); converting the data associated with the current velocity to a sound and outputting the sound (Col. 3, Line 58 – Col. 4, Line 27) (outputting the sound associated with the maximum velocity at maximum velocity).

However, Truchsess does not disclose a moving speed calculating section for based on the acceleration operation input data and the deceleration operation input data input via the operating section calculation a moving speed of the object in a game space; or calculating a read start address of selected sound data in accordance with a ratio of a current moving speed of the object in the game space to the maximum speed.

Comair '956 does disclose a moving speed calculating section for based on the acceleration operation input data and the deceleration operation input

data input via the operating section calculation a moving speed of the object in a game space (paragraph [0008] – paragraph [0009], paragraph [0029]) (Fig. 4); and calculating a read start address of selected sound data in accordance with a ratio of a current moving speed of the object in the game space to the maximum speed (Comair discloses reading from memory a sound wave dependent of various parameters, including speed (paragraph [0008] – paragraph [0009]) which inherently includes calculating an address to read from a finite number of stored sound waves (from minimum speed to maximum speed) (Fig.4, the object at speeds of 0/300, 110/300 and 300/300 each have a separate sound waves stored in memory with each having a separate address to access said sound waves))

Therefore it would have been obvious to one skilled in the art at the time the invention was made to integrate the teachings of Comair into the teachings of Truchsess in order to yield the predictable result of more accurately pointing to the correct space in memory to more realistically replicate the sounds an object makes as it varies in speed and acceleration.

Regarding claims 2 and 12: Truchsess and Comair disclose that which is disclosed above. Truchsess further discloses that the read address calculating section changes a calculation target at the read start address from one to the other between the acceleration sound data and the deceleration sound data, while the sound data read section sequentially reads, in response to a change of the calculation target of the read address calculating section, sound data newly

targeted for calculation from the read start address, thereby continuously reading different types of sound data before and after the change of the calculation target (Col. 4, Lines 1-26).

Regarding claims 3 and 13: Truchsess and Comair disclose that which is disclosed above. Truchsess further discloses that when the sound data reading section is sequentially reading the acceleration sound data in response to the acceleration operation input data from the operating section, if there is an input of the deceleration operation input data from the operating section, the read start address calculating section calculates the read start address of the deceleration sound data based on the moving speed (when accelerating from minimum speed the jump vector directs the microcontroller to an address in memory, which is based on the fact that the car is at minimum speed) (Col. 4, Lines 1-27) corresponding to a read address (jump vector, Fig. 3) of the acceleration sound data being read by the sound data reading section (as shown in Fig. 3) (Col. 4, Lines 1-26).

Regarding claims 4 and 14 Truchsess and Comair disclose that which is disclosed above. Truchsess further discloses when the sound data reading section is sequentially reading the deceleration sound data in response to the deceleration operation input data from the operating section, if there is an input of the acceleration operation input data from the operating section, the read address calculating section calculates the read start address of the acceleration sound data based on the moving speed (when decelerating from maximum

speed the jump vector directs the microcontroller to an address in memory, which is based on the fact that the car is at maximum speed) (Col. 4, Lines 1-27) corresponding to a read address (jump vector, Fig. 3) of the deceleration sound data being read by the sound data reading section (as shown in Fig. 3) (Col. 4, Lines 1-26).

Regarding claims 5 and 15: Truchsess and Comair disclose that which is disclosed above. Truchsess further discloses that the acceleration sound data stored in the acceleration sound storage section contains at least sound data corresponding to an acceleration range where the object accelerates from a minimum speed to a maximum speed at a constant acceleration rate (as shown in Fig. 1) (Col. 4, Lines 11-16); and the deceleration sound data stored in the deceleration sound storage section contains at least sound data corresponding to a deceleration range where the object decelerates from the maximum speed to the minimum speed at a constant deceleration rate (as shown in Fig. 1) (Col. 4, Lines 16-20).

Regarding claims 6, 16, and 24: Truchsess and Comair disclose that which is disclosed above. Truchsess further discloses that the acceleration sound data stored in the acceleration sound storage section further contains sound data corresponding to a maximum and constant speed range, where the object moves at the maximum and constant speed, and the sound data corresponding to a maximum and constant speed range is sequential in address to the sound data corresponding to the acceleration range (as shown in Fig. 1)

(Col. 4, Lines 11-16); and the sound data reading section repeatedly reads the acceleration sound data corresponding to the maximum and constant speed range if the acceleration operation input data is continuously input from the operating section for a period of a prescribed time (the time the acceleration input must be pressed to reach maximum speed) or more (until the acceleration input is released) (as shown in Fig. 1) (Col. 4, Lines 9-16).

Regarding claims 7 and 17: Truchsess and Comair disclose that which is disclosed above. Truchsess further discloses that the deceleration sound data stored in the deceleration sound storage section further contains sound data corresponding to a minimum and constant speed range, where the object moves at the minimum and constant speed, and the sound data corresponding to a minimum and constant speed range is sequential in address to the sound data corresponding to the deceleration range (as shown in Fig.1) (Col. 4, Lines 16-20); and the sound data reading section repeatedly reads the deceleration sound data corresponding to the minimum and constant speed range if the deceleration operation input data is continuously input from the operating section for a period of a prescribed time (the time the deceleration input must be pressed to reach minimum speed) or more (until the acceleration input is pressed) (as shown in Fig. 1) (Col. 4, Lines 9-16).

Regarding claims 10 and 20: Truchsess and Comair disclose that which is disclosed above. Truchsess further discloses that the object is a vehicle (Col.

1, Line 59); and the action parameter corresponds to a speed of the vehicle (Col. 4, Line 13-14).

Regarding claim 22: Truchsess and Comair disclose that which is disclosed above. Truchsess further discloses that velocity A equals velocity B (the vehicle goes from minimum speed (velocity A) to a maximum speed (velocity A') back to minimum speed (velocity B).

4. Claims 8-9, 18-19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Truchsess (US 5734726) in view of Comair et al (US 2003/0045956) as applied to claims 1, 11 & 21 above, and further in view of Klayman (US 5,784,468).

Regarding Claims 8-9, 18-19, and 23: Truchsess discloses that which is discussed above. Truchsess further discloses that the operating section is able to input acceleration and deceleration operation input data for accelerating and decelerating the movement of the object at an arbitrary rate of speed in accordance with a degree of operation designated by the player (Col. 3, Lines 43-52). However, Truchsess does not disclose that the sound output control section includes an acceleration and deceleration sound frequency correcting section.

Klayman teaches processing sound signals by applying frequency correction (Col. 12, Lines 22-33; Col. 15, Lines 23-30).

Therefore, in view of Klayman, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined device and method of Truchsess and Comair to include applying

frequency correction to the acceleration and deceleration data in order to acoustically enhance the output from the speakers that results in an even greater enhancement of spatial sound stage.

Response to Arguments

5. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON PINHEIRO whose telephone number is (571)270-1350. The examiner can normally be reached on M - F 8:00 AM - 4 PM;.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert E Pezzuto/
Supervisory Patent Examiner, Art Unit 3714

JP
02/27/2007